

CLAIMS

We claim:

1. A method of delivering a message from a message source device to a
5 message receiving device through a gateway communicating with a plurality of messaging
centers, the method comprising:
- transmitting a message from the message source device to the gateway, the
message being associated with a service type;
- determining a routing method based on the service type; and
- 10 routing the message to one of the plurality of messaging centers according to the
routing method.
2. A method of delivering a message according to claim 1, wherein the
message source device is one of a plurality of different message source devices that
15 communicate with the gateway using a single interface protocol.
3. A method of delivering a message according to claim 2, wherein the
routing method is selected from a group consisting of message center specific, load
balancing, mobile destination number (MDN) range, equal allocation and electronic serial
20 number.
4. A method of delivering a message according to claim 3, wherein the
message center specific routing method routes all messages for the service type of the
routed message to a specific messaging center.

25

5. A method of delivering a message according to claim 3, wherein the load balancing routing method routes messages to a group of message centers based on load capabilities of each message center in the group of message centers.

5 6. A method of delivering a message according to claim 3, wherein the MDN range routing method routes messages to a specific message center based on the MDN range of the destination address.

Sub
a2
10 7. A method of delivering a message according to claim 6, wherein the MDN range routing method uses service type and destination address for routing decisions.

8. A method of delivering a message according to claim 3, wherein the equal allocation routing method routes messages to a group of message centers based on sequentially sending messages to each message center in the group of message centers such that each message center in the group receives an equal number of messages.

9. A method of delivering a message from a message source device to a message receiving device through a plurality of message centers communicating with a gateway, the method comprising:

transmitting the message from the message source device to one of the plurality of message centers, the message being associated with a service type;

transmitting the message from the one of the plurality of message centers to the gateway;

25 determining a routing method based on the service type; and

routing the message to the message receiving device according to the routing method.

10. A method of delivering a message according to claim 9, wherein the message source device is one of a plurality of different message source devices that communicate with the plurality of message centers using a single interface protocol.

11. A method of delivering a message according to claim 10, wherein the routing method is selected from a group consisting of message receiving device specific, load balancing, equal allocation, destination IP address, and destination address.

12. A method of delivering a message according to claim 11, wherein the message receiving device specific routing method routes all messages for the service type of the routed message to a specific messaging receiving device.

13. A method of delivering a message according to claim 11, wherein the load balancing routing method routes messages to a group of message receiving devices based on load capabilities of each message receiving device in the group of message receiving devices.

14. A method of delivering a message according to claim 11, wherein the equal allocation routing method routes messages to a group of message destination devices based on sequentially sending messages to each message receiving device in the group such that each message receiving device receives an equal number of messages.

15. A method of delivering a message according to claim 11, wherein the destination IP address routing method routes the message to a destination based on an IP address contained in a destination address parameter.

5 16. A method of delivering a message according to claim 11, wherein the destination address routing method routes the message to a destination message receiving device based on a value of a destination parameter.

Sub
UD0

17. A method of processing mobile device terminated messages transmitted from a message source and received by a gateway, the message being associated with a service type, the method comprising:

invoking a routing method based on the service type;

routing the message to a message center according to the invoked routing method; and

15 transmitting the message from the message center to the mobile device.

18. The method of claim 17, further comprising:
invoking the routing method only if a throttle control limit is not exceeded.

20 19. The method of claim 18, further comprising:
invoking the routing method only if an anti-spamming check returns an allowed status.

20. The method of claim 19, further comprising:
25 when the message center receives the message, responding to the gateway indicating that the message was received.

21. The method of claim 20, further comprising:
when the gateway receives the response signal from the message center, sending
to the message source a response signal indicating that the message was received by the
5 message center.

22. The method of claim 21, further comprising:
if the message source throttle limit is exceeded, transmitting an alarm when the
message is rejected.

23. The method of claim 22, further comprising:
if a message center is not available for the service type associated with the
message, transmitting an alarm when the message is rejected.

24. A method of processing a mobile device terminated (MT) message
15 transmitted from a message source and received by a gateway, the MT message being
associated with a service type, the method comprising:
determining whether the message source is bound to the gateway;
rejecting the MT message if the message source is not bound to the gateway;
20 determining whether the message source is authorized for the service type if the
message source is bound to the gateway;
rejecting the MT message if the message source is not authorized for the service
type;
determining whether throttle control limits are exceeded for the message source
25 if the message source is authorized for the service type;
rejecting the MT message if throttle control limits are exceeded;

determining whether anti-spamming is enabled for the service type if throttle control limits are not exceeded;

requesting an anti-spam check if anti-spamming is enabled;

invoking a routing method for the service type if the anti-spam check returns

5 allowed;

rejecting the MT message if the anti-spam check returns not allowed;

invoking a routing method for the service type if anti-spamming is not enabled

for the service type;

determining whether a message center is available for the service type;

rejecting the message if no message center is available;

routing the message to a destination message center if a message center is available;

receiving a response from the destination message center; and

transmitting the response to the message source.

15

25. The method of claim 24, further comprising:

if a message center is available for the service type associated with the MT message, determining whether the message center is subject to flow control and whether an alternate message center is available; and

20 rejecting the message if the message center is subject to flow control and no alternate message center is available.

26. The method of claim 25, further comprising:

after the gateway receives a response from the destination message center,

25 determining whether the response indicates congestion;

determining whether an alternate message center is available if congestion exists;

if an alternate message center is available when congestion exists, routing the message to the alternate destination message center;

if no alternate message center is available , invoking flow control at the destination message center and rejecting the message; and

5 sending the response to the message source if no congestion exists.

Sub
92

09714035-111700